+33 (0)1 48 10 09 46
formation@ambient-it.net
140 Avenue Jean Lolive 93500 Pantin - France

Updated 05/28/2024

Sign up

Azure Arc training

3 days (21 hours)

Presentation

Azure Arc is a multi-cloud platform for controlling and managing increasingly complex environments. This platform enables businesses to run their workloads close to their data.

Azure Arc lets you extend Azure security and management to other infrastructures. It gives you a centralized, unified and self-service approach to managing Windows servers, Linux servers and Kubernetes clusters. What's more, you can automatically create and apply policies to all your resources.

This Azure Arc training course will teach you the basics of hybrid, multicloud and edge computing. You'll learn how to integrate Azure Arc into your IT strategy, how to quickly patch virtual machine operating systems and how to manage lifecycles with Azure Resource Manager.

Objectives

- Configuring Azure Arc and Kubernetes servers on multiple clouds
- Centralized management of different resources (Windows, Linux, SQL servers, Kubernetes clusters)
- Using GitOps for cloud-native applications and Kubernetes
- Introducing Azure data services in hybrid environments
- Apply security strategies

Target audience

- System administrator
- Cloud administrators
- DevOps engineers
- Safety engineers

Prerequisites

- Knowledge of databases
- Knowledge of SQL
- Basic knowledge of Kubernetes
- An Azure account with Arc functionality

Azure Arc training program

Introduction to Azure Arc

- What is Azure Arc?
- Azure Arc via multicloud
- Promise Single Pane of Glass
- Use cases
  - Tracking changes
  - Detecting register changes
  - Monitor performance
- Configuration
- Azure Cloud Shell

Azure Arc and Kubernetes

- Azure Kubernetes service
- Kubernetes enabled by Azure Arc
- Kubernetes architecture and agents compatible with Azure Arc
- Creating a main service name
- Connecting Kubernetes clusters to Azure Arc
- Using Azure Active Directory with Kubernetes clusters projected onto Azure Arc
- Deploying applications on Kubernetes clusters projected onto Azure Arc with GitOps
- Monitoring a Kubernetes cluster projected onto Azure Arc with Azure Monitor

Features

- Implementing consistency at different levels
- Configuring Azure virtual machine extensions
- Managing large-scale Kubernetes clusters
- Using GitOps
- Deploy configuration on multiple clusters
- Azure Policy

Architecture

- Lifecycle management of various resources
- Azure Fabric Controler
- Azure Resource Manager (ARM)
- Register resource providers

Environment management

- Manage the entire environment with a single pane
- Azure Ressource Manager
- Managing virtual machines
  - Kubernetes clusters
  - Databases
- Using IT operators (ITOps)
- Support for native cloud templates
- Setting up custom locations

Managing resource types outside Azure

- Virtual machines and physical machines
- Support for Kubernetes distributions
- Data services
  - Azure SQL Managed Instance Services
  - PostgreSQL Hyperscale
- Register instances from any location

SQL Server instance management

- Enable SQL Server
- Installing a SQL Server instance
- Large-scale instance integration
- Data services compatible with Azure Arc
- Deploying a data controller
- Deploying a managed SQL instance compatible with Azure Arc
- Deploying a PostgreSQL Hyperscale instance powered by Azure Arc

Multi-cloud management with Azure

- Technical requirements
- Multi-cloud solutions with Azure Arc
- Multi-cloud server management
- Kubernetes multi-cloud management
- Hosting Azure data services on other cloud platforms
- Multi-cloud solutions managed by Azure

- Azure Active Directory multi-cloud solutions

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.